



SPYWOLF

Security Audit Report



Completed on
February 25, 2023

@SPYWOLFNETWORK



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SPYWOLF.CO





OVERVIEW

This audit has been prepared for **Lock AI** to review the main aspects of the project to help investors make an informative decision during their research process.

You will find a summarized review of the following key points:

- ✓ Contract's source code
- ✓ Owners' wallets
- ✓ Tokenomics
- ✓ Team transparency and goals
- ✓ Website's age, code, security and UX
- ✓ Whitepaper and roadmap
- ✓ Social media & online presence

“

The results of this audit are purely based on the team's evaluation and does not guarantee nor reflect the projects outcome and goal

”

- SPYWOLF Team -





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LOCK AI



PROJECT DESCRIPTION

According to their website:

"\$LAI is a liquid staking aggregator protocol based on algorithms that detect and calculate the best possible solution for the highest APY. \$LAI uses a proprietary smart contract to manage and automatically rebalance the portfolio to generate the best APY's for its investors."

Release Date: Launched in February, 2023

Category: Staking



CONTRACT INFO

Token Name

Lock AI

Symbol

LOCKAI

Contract Address

0x7444FD47e53A033D130Af8a7854949Cfb50c1F9D

Network

Ethereum

Language

Solidity

Deployment Date

Dec 25, 2022

Verified?

Yes

Total Supply

10,000,000 LOCKAI

Status

Launched

TAXES

Buy Tax

5%

Sell Tax

5%

*Taxes cannot be changed in future



Our Contract Review Process

The contract review process pays special attention to the following:

- ✓ Testing the smart contracts against both common and uncommon vulnerabilities
- ✓ Assessing the codebase to ensure compliance with current best practices and industry standards.
- ✓ Ensuring contract logic meets the specifications and intentions of the client.
- ✓ Cross referencing contract structure and implementation against similar smart contracts produced by industry leaders.
- ✓ Thorough line-by-line manual review of the entire codebase by industry experts.

Blockchain security tools used:

- OpenZeppelin
- Mythril
- Solidity Compiler
- Hardhat



TOKEN TRANSFERS STATS

Transfer Count	380
Uniq Senders	92
Uniq Receivers	172
Total Amount	52397010.456935145 LOCKAI
Median Transfer Amount	72769.338430591 LOCKAI
Average Transfer Amount	137886.86962351354 LOCKAI
First transfer date	2023-02-25
Last transfer date	2023-02-25
Days token transferred	1

SMART CONTRACT STATS

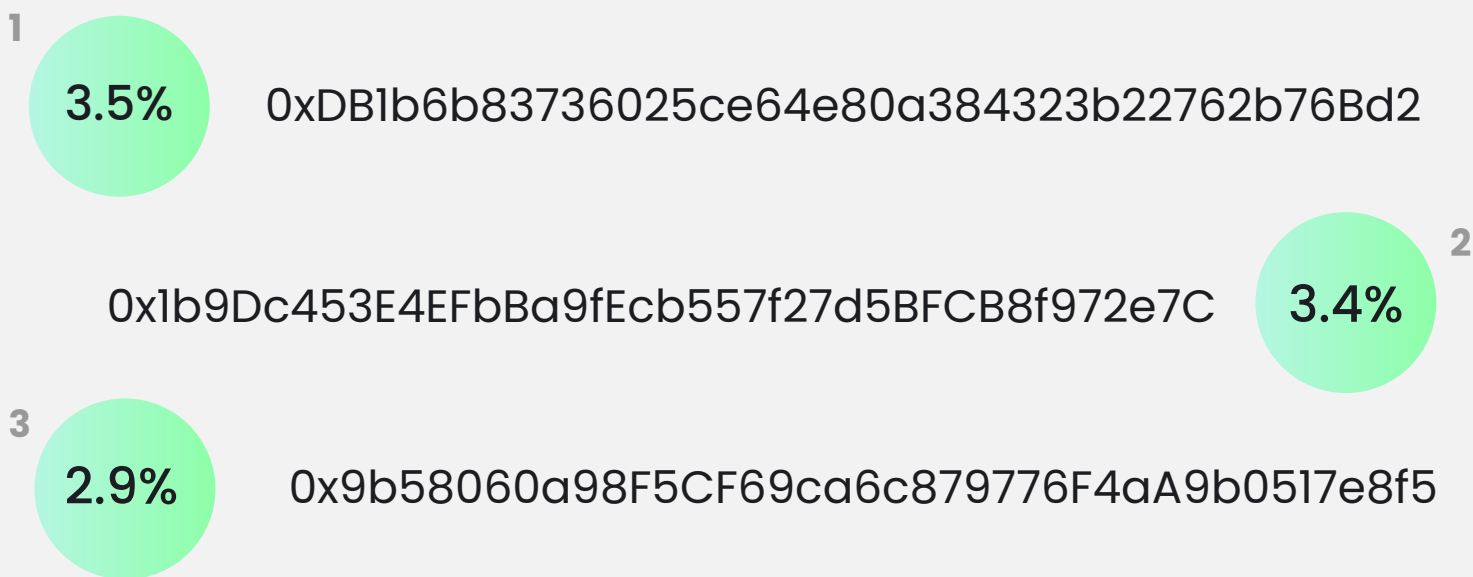
Calls Count	1373
External calls	150
Internal calls	1223
Transactions count	489
Uniq Callers	340
Days contract called	1
Last transaction time	2023-02-25 12:50:59 UTC
Created	2023-02-25 00:41:59 UTC
Create TX	0x9c0544ba8ae35dc9757056d3da3b4c01724838259abebe1le1559de30e332971
Creator	0x636c830cef987a0cc821f8e2a570a7802afca6d0



FEATURED WALLETS

Owner address	0x00 Ownership is renounced <i>Original owner: 0x636C830Cef987A0CC821F8E2a570a7802afCa6d0</i>
Marketing wallet	0x9a195e38310622F6962EFbc93504a0a0F01dAcea
Development wallet	0x636C830Cef987A0CC821F8E2a570a7802afCa6d0
LP address	Uniswap: 0xabEe2f3923Ed12129f66aD41ca30E69250dABABA

TOP 3 UNLOCKED WALLETS





VULNERABILITY CHECK

Design Logic	Passed
Compiler warnings.	Passed
Private user data leaks	Passed
Timestamp dependence	Passed
Integer overflow and underflow	Passed
Race conditions and reentrancy. Cross-function race conditions	Passed
Possible delays in data delivery	Passed
Oracle calls	Passed
Front running	Passed
DoS with Revert	Passed
DoS with block gas limit	Passed
Methods execution permissions	Passed
Economy model	Passed
Impact of the exchange rate on the logic	Passed
Malicious Event log	Passed
Scoping and declarations	Passed
Uninitialized storage pointers	Passed
Arithmetic accuracy	Passed
Cross-function race conditions	Passed
Safe Zeppelin module	Passed
Fallback function security	Passed



THREAT LEVELS

When performing smart contract audits, our specialists look for known vulnerabilities as well as logical and access control issues within the code. The exploitation of these issues by malicious actors may cause serious financial damage to projects that failed to get an audit in time. We categorize these vulnerabilities by the following levels:

High Risk

Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

Medium Risk

Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

Low Risk

Issues on this level are minor details and warning that can remain unfixed.

Informational

Information level is to offer suggestions for improvement of efficacy or security for features with a risk free factor.



FOUND THREATS

⚠ High Risk

Development wallet and marketing wallet can initiate manual token swaps from contract and withdraw eth from the contract. If contract's token swap balance is 0 transactions will fail.

```
function manualswap() external {
    require(_msgSender() == _developmentAddress || _msgSender() == _marketingAddress);
    uint256 contractBalance = balanceOf(address(this));
    swapTokensForEth(contractBalance);
}

function manualsend() external {
    require(_msgSender() == _developmentAddress || _msgSender() == _marketingAddress);
    uint256 contractETHBalance = address(this).balance;
    sendETHToFee(contractETHBalance);
}
```

- ✓ **Contract's ownership is renounced.**
- ✓ **Owner does not have any special privileges.**



Informational

Before ownership renouncement owner could:

Enable/disable trading, blacklist address from trading.

Set fees without limit, set max transaction amount without limit.

```
function setTrading(bool _tradingOpen) public onlyOwner {
    tradingOpen = _tradingOpen;
}

function blockBots(address[] memory bots_) public onlyOwner {
    for (uint256 i = 0; i < bots_.length; i++) {
        bots[bots_[i]] = true;
    }
}

function setFee(uint256 redisFeeOnBuy, uint256 redisFeeOnSell,
uint256 taxFeeOnBuy, uint256 taxFeeOnSell) public onlyOwner {
    _redisFeeOnBuy = redisFeeOnBuy;
    _redisFeeOnSell = redisFeeOnSell;

    _taxFeeOnBuy = taxFeeOnBuy;
    _taxFeeOnSell = taxFeeOnSell;
}

function setMaxTxnAmount(uint256 maxTxAmount) public onlyOwner {
    _maxTxAmount = maxTxAmount;
}
```

- ✓ **Contract's ownership is renounced.**
- ✓ **Owner does not have any special privileges.**



RECOMMENDATIONS FOR

GOOD PRACTICES

1

Consider fundamental tradeoffs

2

Be attentive to blockchain properties

3

Ensure careful rollouts

4

Keep contracts simple

5

Stay up to date and track development

Lock AI

GOOD PRACTICES FOUND

- ✓ The owner cannot mint new tokens after deployment
- ✓ The owner cannot stop or pause the contract
- ✓ The owner can set a transaction limit, but can't lower it than 1% of total supply
- ✓ The smart contract utilizes "SafeMath" to prevent overflows



There is no information about the initial token distribution in their website and/or whitepaper.

TOKENOMICS



WEBSITE

Website URL

<https://lockaierc.com/>

Domain Registry

<https://www.hostinger.com>

Domain Expiration

Expires on 2023-12-05

Technical SEO Test

Passed

Security Test

Passed. SSL certificate present

Design

Very nice color scheme and overall layout.

Content

The information helps new investors understand what the product does right away. No grammar mistakes found.

Whitepaper

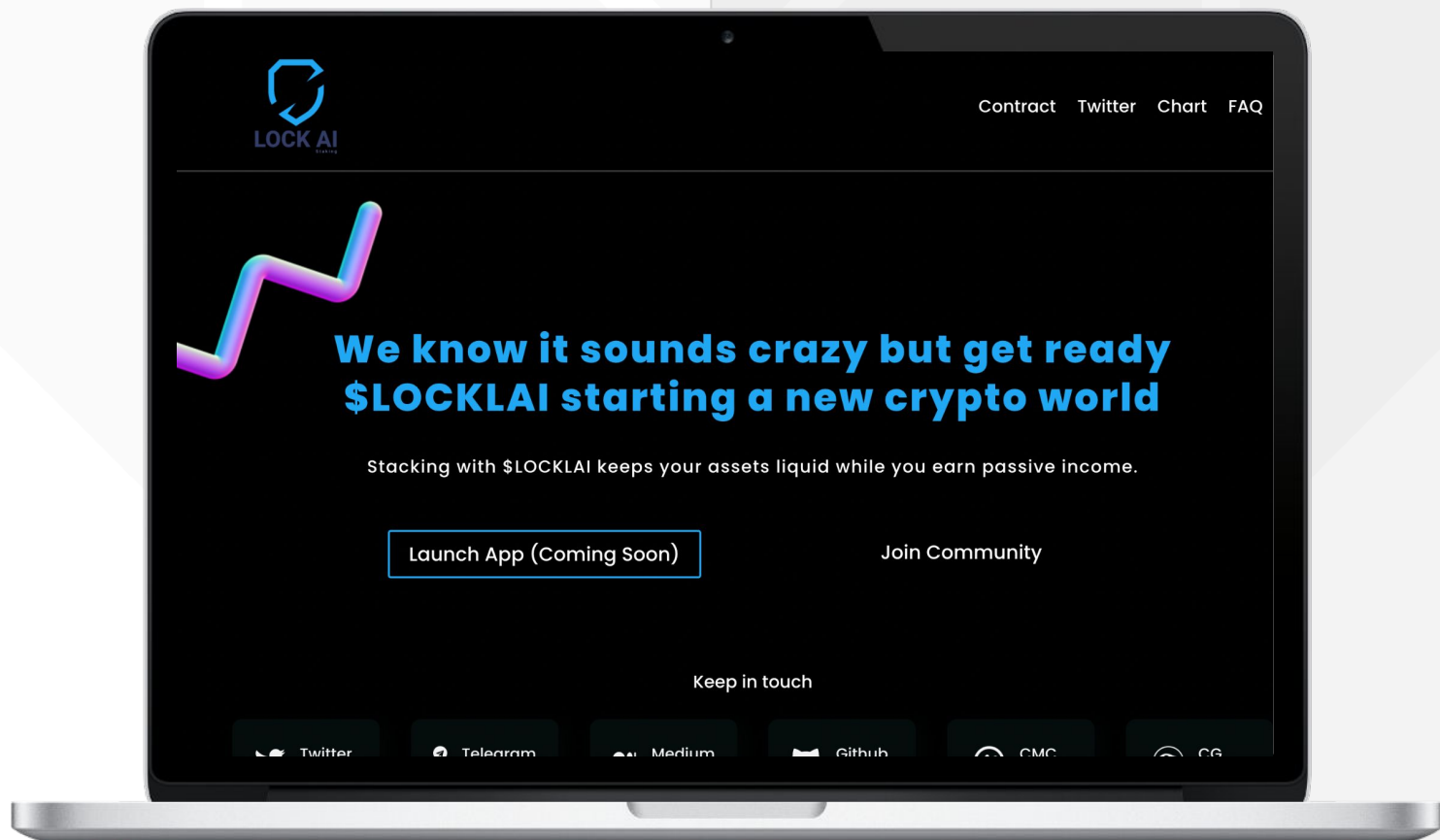
No whitepaper found

Roadmap

Yes

Mobile-friendly?

Yes



lockaierc.com

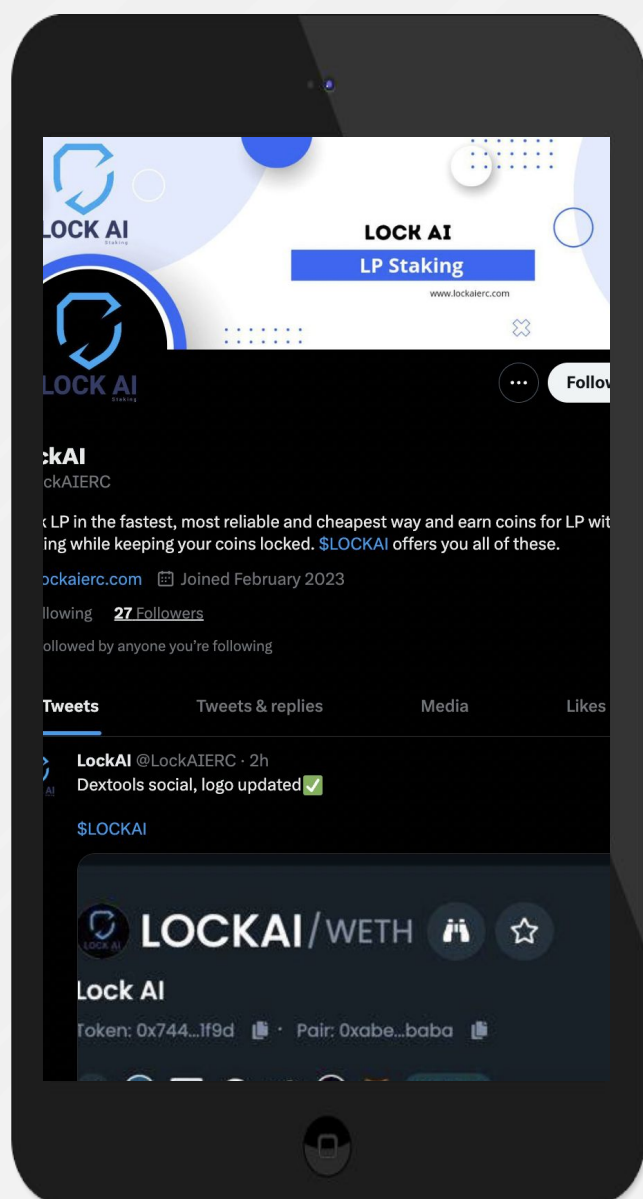


SOCIAL MEDIA & ONLINE PRESENCE



ANALYSIS

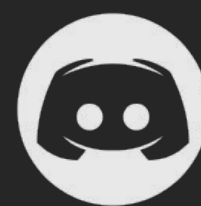
Project's social media activity is concentrated in telegram with organic users interactions.



Twitter

@lockaierc

- 27 followers
- Daily posts



Discord

- Not available



Telegram

@t.me/lockaierc

- 1484 members
- Active community and mods



Medium

@roninerc

- 1 post



SPYWOLF

CRYPTO SECURITY

Audits | KYCs | dApps
Contract Development

ABOUT US

We are a growing crypto security agency offering audits, KYCs and consulting services for some of the top names in the crypto industry.

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Disclaimer

This report shows findings based on our limited project analysis, following good industry practice from the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, overall social media and website presence and team transparency details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report.

While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the disclaimer below – please make sure to read it in full.

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No applications were reviewed for security. No product code has been reviewed.